

TABLE 63. Statistical profile of postgraduation plans of doctorate recipients in engineering fields, by sex and field of study: 2011

Characteristic	All engineering fields	Aerospace/aeronautical engineering	Chemical engineering	Civil engineering	Electrical/electronics engineering	Industrial/manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
	Number								
All doctorate recipients ^a	8,004	261	826	636	1,891	263	662	1,084	2,381
Postgraduation status ^b									
Definite postgraduation study	1,808	57	208	144	296	32	178	261	632
Definite employment	2,603	86	262	183	717	115	200	346	694
Seeking employment or study	2,416	80	258	213	557	78	201	320	709
Other ^c	213	5	16	12	46	11	18	21	84
	Percent								
Definite postgraduation study ^d									
Postdoc fellowship	32.5	26.3	32.7	29.2	23.6	37.5	27.5	25.3	41.9
Postdoc research associateship	64.1	71.9	64.4	64.6	72.6	62.5	69.7	73.2	54.0
Other/unknown ^e	3.4	1.8	2.9	6.3	3.7	0.0	2.8	1.5	4.1
Definite employment ^f									
Academe	17.0	14.0	7.6	33.9	10.3	40.9	7.0	19.1	21.3
Government	11.5	D	D	21.3	8.5	11.3	8.5	13.6	13.7
Industry/business ^g	67.1	57.0	85.9	37.2	77.4	42.6	80.0	64.7	59.9
Not-for-profit organization	2.6	D	D	3.8	2.4	D	3.0	D	3.0
Other/unknown ^h	1.8	1.2	1.1	3.8	1.4	D	1.5	D	2.0
Primary activity ^j									
R&D	75.5	78.2	85.7	44.8	84.1	53.2	87.5	78.5	69.0
Teaching	8.5	6.4	3.7	18.4	5.0	24.8	3.3	9.7	9.7
Management or administration	5.2	D	3.3	13.5	3.8	D	D	3.1	7.1
Professional services	8.0	7.7	5.3	20.9	4.4	7.3	4.9	5.3	11.9
Other	2.9	D	2.0	2.5	2.7	D	D	3.4	2.4
Secondary activity ^j									
R&D	12.9	16.7	7.0	25.8	9.1	25.7	3.8	10.9	16.9
Teaching	7.7	9.0	D	17.8	D	22.0	4.9	9.0	7.8
Management or administration	19.4	21.8	24.6	9.2	19.3	13.8	25.0	21.2	18.5
Professional services	6.6	6.4	D	8.6	D	6.4	4.9	6.9	6.6
Other	2.2	2.6	2.9	3.1	2.0	0.0	1.1	2.5	2.4
No secondary activity	51.1	43.6	58.2	35.6	57.8	32.1	60.3	49.5	47.8
Activity unknown	8.0	9.3	6.9	10.9	8.1	5.2	8.0	7.2	8.1
Postgraduation location ^l									
United States ^k	87.3	85.3	91.3	77.1	89.6	74.1	86.8	88.1	88.2
New England	7.9	9.1	9.1	4.9	7.0	3.4	6.9	8.2	9.3
Middle Atlantic	12.0	7.0	13.8	11.3	11.9	12.9	14.3	10.4	12.2
East North Central	11.2	8.4	13.0	7.3	7.8	15.0	12.7	17.5	10.9
West North Central	3.7	6.3	5.1	4.0	2.4	4.1	4.2	3.8	3.7

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South Atlantic	13.7	23.1	14.7	15.0	11.8	20.4	9.0	11.4	15.2
East South Central	3.0	D	1.9	4.6	1.8	D	2.6	3.5	4.1
West South Central	6.7	5.6	10.6	8.9	6.4	5.4	4.0	4.9	6.9
Mountain	6.2	D	6.2	7.3	5.6	D	10.6	7.2	5.1
Pacific and insular	22.1	17.5	15.7	13.5	34.3	6.8	22.2	21.3	19.8
Not in United States	12.5	14.7	8.7	22.9	10.0	25.2	13.0	11.5	11.8
Location unknown	0.2	0.0	0.0	0.0	0.4	0.7	0.3	0.3	0.0
Number									
Male doctorate recipients	6,218	227	567	488	1,583	184	496	934	1,739
Postgraduation status ^b									
Definite postgraduation study	1,392	50	148	112	254	21	130	228	449
Definite employment	2,138	80	194	144	621	88	157	303	551
Seeking employment or study	1,803	68	161	155	457	49	149	274	490
Other ^c	159	3	13	8	39	7	12	16	61
Percent									
Definite postgraduation study ^d									
Postdoc fellowship	31.3	D	28.4	D	D	D	26.2	24.6	40.3
Postdoc research associateship	65.2	D	67.6	62.5	71.3	D	70.8	73.7	55.2
Other/unknown ^e	3.4	2.0	4.1	D	D	0.0	3.1	1.8	4.5
Definite employment ^f									
Academe	16.3	D	D	34.7	9.8	42.0	5.7	17.2	20.7
Government	11.6	22.5	4.1	20.1	8.9	D	D	12.5	14.0
Industry/business ^g	67.8	D	84.5	39.6	77.6	D	80.3	67.7	60.4
Not-for-profit organization	2.6	D	D	D	D	D	D	D	D
Other/unknown ^h	1.7	1.3	1.5	D	D	D	1.9	D	D
Primary activity ^j									
R&D	76.5	D	86.3	D	84.7	47.6	88.9	80.4	71.2
Teaching	8.1	6.8	D	18.6	4.7	D	D	7.5	9.8
Management or administration	5.3	D	D	D	D	11.9	D	D	6.5
Professional services	7.4	D	D	20.9	4.2	D	D	D	10.2
Other	2.7	D	2.2	2.3	D	3.6	D	D	2.4
Secondary activity ^j									
R&D	12.6	17.8	D	27.9	9.1	26.2	D	9.6	15.9
Teaching	7.8	D	D	17.8	5.1	20.2	D	8.5	8.8
Management or administration	20.5	D	24.6	D	21.2	D	27.8	22.4	19.2
Professional services	7.1	6.8	6.6	D	7.5	D	D	D	6.9
Other	2.1	2.7	3.3	D	1.9	0.0	0.7	D	2.2
No secondary activity	49.9	D	56.3	32.6	55.1	D	58.3	50.5	47.1
Activity unknown	7.7	8.8	5.7	10.4	8.2	4.5	8.3	7.3	7.4

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Characteristic	All engineering fields	Aerospace/aeronautical engineering	Chemical engineering	Civil engineering	Electrical/electronics engineering	Industrial/manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Postgraduation location ^j									
United States ^k	86.7	D	91.8	74.6	89.0	D	84.7	87.8	88.2
New England	7.6	D	9.6	D	6.7	4.6	7.0	8.3	8.5
Middle Atlantic	11.4	7.7	12.0	10.5	11.4	12.8	12.5	9.6	12.2
East North Central	11.2	D	13.2	D	7.3	D	12.9	18.1	10.3
West North Central	3.9	D	5.3	D	D	D	D	D	3.6
South Atlantic	13.1	D	14.9	14.1	11.5	D	8.0	11.7	14.3
East South Central	3.1	D	D	D	D	D	D	D	4.6
West South Central	7.0	D	11.1	D	6.6	D	D	D	7.4
Mountain	6.4	5.4	6.1	6.6	D	D	10.5	6.8	5.8
Pacific and insular	22.5	D	16.1	12.5	34.5	D	21.6	21.1	20.4
Not in United States	13.1	D	8.2	25.4	10.6	D	15.0	11.9	11.8
Location unknown	0.2	0.0	0.0	0.0	0.3	0.9	0.3	0.4	0.0
Number									
Female doctorate recipients	1,778	34	258	147	302	79	166	150	642
Postgraduation status ^b									
Definite postgraduation study	416	7	60	32	42	11	48	33	183
Definite employment	464	6	68	38	96	27	43	43	143
Seeking employment or study	613	12	97	58	100	29	52	46	219
Other ^c	54	2	3	4	7	4	6	5	23
Percent									
Definite postgraduation study ^d									
Postdoc fellowship	36.3	D	43.3	D	D	D	31.3	30.3	45.9
Postdoc research associateship	60.3	D	56.7	71.9	81.0	D	66.7	69.7	50.8
Other/unknown ^e	3.4	0.0	0.0	D	D	0.0	2.1	0.0	3.3
Definite employment ^f									
Academe	20.3	D	D	31.6	13.5	37.0	11.6	32.6	23.8
Government	11.0	D	D	23.7	6.3	D	D	20.9	12.6
Industry/business ^g	63.8	D	89.7	28.9	76.0	D	79.1	44.2	58.0
Not-for-profit organization	2.6	D	D	D	D	0.0	D	0.0	D
Other/unknown ^h	2.4	0.0	0.0	D	D	0.0	0.0	2.3	D
Primary activity ^j									
R&D	70.6	D	83.6	D	79.8	72.0	82.5	65.0	60.2
Teaching	10.2	0.0	D	17.6	6.7	D	D	25.0	9.4
Management or administration	4.7	0.0	D	D	D	D	0.0	D	9.4
Professional services	10.7	D	D	20.6	5.6	D	D	D	18.8
Other	3.8	0.0	1.6	2.9	D	D	7.5	D	2.3

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Characteristic	All engineering fields	Aerospace/aeronautical engineering	Chemical engineering	Civil engineering	Electrical/electronics engineering	Industrial/manufacturing engineering	Materials science engineering	Mechanical engineering	Other engineering
Secondary activity ^l									
R&D	14.5	0.0	D	17.6	9.0	24.0	D	20.0	21.1
Teaching	7.1	D	D	17.6	D	28.0	D	12.5	3.9
Management or administration	14.5	D	24.6	D	6.7	D	15.0	12.5	15.6
Professional services	4.5	0.0	D	D	D	D	D	D	5.5
Other	2.6	0.0	1.6	D	2.2	0.0	2.5	D	3.1
No secondary activity	56.9	D	63.9	47.1	75.3	D	67.5	42.5	50.8
Activity unknown	9.1	16.7	10.3	10.5	7.3	7.4	7.0	7.0	10.5
Postgraduation location ^l									
United States ^k	89.7	D	89.8	85.7	93.5	D	93.4	90.8	88.0
New England	9.1	D	7.8	D	8.7	0.0	6.6	7.9	11.7
Middle Atlantic	14.8	0.0	18.8	14.3	15.2	13.2	19.8	15.8	12.3
East North Central	11.4	D	12.5	D	10.9	D	12.1	13.2	12.6
West North Central	3.1	D	4.7	D	D	D	D	D	4.0
South Atlantic	16.3	D	14.1	18.6	13.8	D	12.1	9.2	18.1
East South Central	2.6	0.0	D	D	D	D	D	D	2.8
West South Central	5.6	D	9.4	D	5.1	D	D	D	5.5
Mountain	5.6	D	6.3	10.0	D	0.0	11.0	10.5	3.1
Pacific and insular	20.7	D	14.8	17.1	32.6	D	24.2	22.4	17.8
Not in United States	10.2	D	10.2	14.3	5.8	D	6.6	9.2	12.0
Location unknown	0.1	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0

D = suppressed to avoid disclosure of confidential information.

^a Includes respondents who did not report sex.

^b Includes only respondents who responded to postgraduation status.

^c Includes respondents who indicated that they did not plan to work or study, respondents who indicated some other type of postgraduation plans, and respondents who indicated definite plans for other full-time degree program.

^d Excludes respondents who indicated plans for other full-time degree program. Percentages are based on number of doctorate recipients reporting definite postgraduation plans for study.

^e "Other" includes respondents who indicated definite postgraduation study plans for traineeship, internship/clinical residency, or other study.

^f Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment.

^g Includes doctorate recipients who indicated self-employment.

^h "Other" is mainly composed of elementary and secondary schools.

ⁱ Percentages based on number of doctorate recipients reporting definite postgraduation plans for employment and primary work activity.

^j Percentages based on number of doctorate recipients reporting definite postgraduation plans and type of plans.

^k Includes cases with a U.S. unknown region of employment after doctorate; see appendix A for states/territories included in regions.

NOTE: Due to rounding, percentages may not sum to 100.

SOURCE: NSF/NIH/USED/USDA/NEH/NASA, Survey of Earned Doctorates, 2011.